

In re Patent Application of:

BRICHER ET AL.

Serial No. **10/806,667**

Filed: **March 23, 2004**

REMARKS

The Examiner is thanked for the thorough examination of the present application. The patentability of the claims is discussed below.

I. The Claimed Invention

The present invention is directed to a cryptographic device. As recited in independent Claim 1, for example, the device includes a cryptographic module and a communications module removably coupled thereto. More particularly, the cryptographic module comprises a first housing, a user network interface carried by the first housing and comprising a plurality of different connectors for coupling the cryptographic module to different network devices, a cryptographic processor carried by the first housing and coupled to the user network interface, and a first connector carried by the first housing and coupled to the cryptographic processor. The communications module includes a second housing, a second connector carried by the second housing and removably mateable with the first connector of the cryptographic module, a network interface carried by the second housing and coupled to the second connector, and at least one logic device for cooperating with the cryptographic processor to determine a status of the communications module.

Independent Claim 13 is directed to a related cryptographic device. Independent Claim 23 is directed to a related communications method, and independent Claim 27 is directed to a related communications system.

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II. The Claims Are Patentable

The Examiner rejected independent Claims 1, 13, 23, and 27 over Dhir et al. in view of Cheng, and further in view of Allmond et al. Dhir et al. is directed to a programmable integrated circuit, namely a field programmable gate array (FPGA), that can be used to handle different wireless local area network (WLAN) communication specifications. The integrated circuit includes a transceiver coupled to programmable gates, a memory coupled to the programmable gates for storing instructions for programming a first portion of the programmable gates with a selected one of a first type of a medium access layer and a second type of a medium access layer. The first type of the medium access layer is different from the second type of medium access layer, though both the first type of the medium access layer and the second type of the media access layer are compatible with the transceiver. The memory is configured for storing instructions for programming a second portion of the programmable gates as a baseband controller.

While the Examiner correctly acknowledges that Dhir et al. fails to teach a cryptographic module and a communications module that are removably coupled to one another, and a user network interface that includes a plurality of different connectors for coupling the cryptographic module to the user network interface, the Examiner contends that Cheng provides some of these critical deficiencies. More particularly, the Examiner contended that Cheng discloses a cryptographic module and a communications module that are removably coupled to one another.

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Cheng is directed to an add-on card for a computer that is detachable from the computer and allows the computer to communicate with both wired and wireless networks. The add-on card includes an access control circuit, volatile and non-volatile memory, a wireless transmission module, and a network connection module. The network connection module has both an antenna for communicating with a wireless network, and a standard network cable port for connecting to a wired network.

The Examiner still further recognized that even a selective combination of Dhir et al. and Cheng fails to disclose the user network interface carried by the first housing comprising a plurality of different connectors for coupling the cryptographic module to different network devices. The Examiner turned to yet a third reference, Allmond et al., in an attempt to supply this critical deficiency. Allmond et al. is directed to an automatic communications protocol detection system. More particularly, Allmond et al. discloses a network for interconnecting a plurality of data devices. Data devices include any source or destination of data to the network, including a computer, workstation, file server, hub, NIC, concentrator, modem, printer, or other device that can receive or transmit data in the network. The network also includes an adaptive repeater. The data devices may be coupled to the repeater via connectors, which may be RJ-45, FDDI, BNC, and SMA connectors, for example.

Applicants submit that the Examiner mischaracterized Allmond et al., in that Allmond et al. fails to disclose the user network interface including a plurality of different connectors

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for coupling the cryptographic module to different network devices. Instead, Allmond et al. discloses a network including an adaptive repeater. The adaptive repeater includes connectors to couple the data devices to the repeater. The connectors depend on the particular communications protocol being used. (See Col. 11, lines 40-56). "It is desired that each of the connectors 322 be the same for a particular repeater." (Emphasis Added. See Col. 11, lines 55-56). Accordingly, Applicants submit that even a selective combination of the prior art references fails to disclose the claimed invention as recited in independent Claims 1, 13, 23, and 27.

Indeed, Allmond et al. connects to a network device via a single type of connector, whether it is an RJ-45 connector or a fiber-optic connector, while the claimed invention, as recited in independent Claims 1, 13, 23, and 27, for example, can connect using a plurality of different connectors. Using a plurality of different connectors advantageously allows quick configuration of the cryptographic module and cost savings over having to purchase another cryptographic device with a different network interface for each desired application. Accordingly, even a selective combination of the cited references fails to disclose the claimed invention, as recited in independent Claims 1, 13, 23, and 27, for example.

Applicants further submit that the Examiner's combination of Dhir et al., Cheng, and Allmond et al. is improper, as a person having ordinary skill in the art would not turn to Cheng to combine with Dhir et al. and Allmond et al. in an attempt to arrive at the claimed invention. More

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particularly, Dhir et al. is directed to a programmable integrated circuit for a WLAN. The communications module and the cryptographic module are purposely on a single FPGA (300) chip, as illustrated in Dhir et al. Combining Dhir et al. with Cheng so that the communications module and the cryptographic module would be removably coupled would require splitting the communications and cryptographic modules from the single FPGA.

Moreover, using Cheng as a motivation to modify Dhir et al. would result in arbitrarily dividing the circuitry of Dhir et al. between the antenna 336 and the WLAN transceiver 301, both of which are outside the FPGA chip and downstream from both the communications and cryptographic modules. This is because Cheng discloses removably coupling the communications modules to a connector portion, including a physical connector and antenna. Accordingly, even if there was some proper motivation to combine Dhir et al. and Cheng, the claimed invention is not produced because the removable coupling is not between the communications module and the cryptographic module.

Still further, one of ordinary skill in the art would not turn to the communication protocol detection system, or more particularly, the repeater (or more simply, the hub) of the detection system to combine with the programmable integrated circuit from Dhir et al. and the add-on card for a computer that is detachable from the computer and allows the computer to communicate with both wired and wireless networks from Cheng. In other words, the Examiner is attempting to combine an FPGA with a PCMCIA network add-on card and a network repeater. Applicants submit that the Examiner is merely combining disjoint pieces of

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the prior art in an attempt to arrive at the claimed invention. Accordingly, it is submitted that the Examiner's combination of references is improper.

Accordingly, it is submitted that independent Claims 1, 13, 23 and 27 are patentable over the prior art. Their respective dependent claims, which recite yet further distinguishing features, are also patentable over the prior art and require no further discussion herein.

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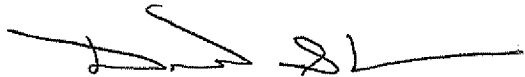
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III. CONCLUSION

In view of the arguments provided herein, it is submitted that all the claims are patentable. Accordingly, a Notice of Allowance is requested in due course. Should any minor informalities need to be addressed, the Examiner is encouraged to contact the undersigned attorney at the telephone number listed below.

Respectfully submitted,



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